

## ABSTRACT

The invention provides a novel compound of Formula II which is useful in the preparation of imipenem monohydrate of Formula I, wherein R<sub>1</sub> is a p-nitrobenzyl or p-methoxybenzyl group; and R<sub>2</sub> and R<sub>3</sub> may be identical to or different from each other and are each independently a C<sub>1-6</sub> alkyl or aryl group, or a derivative thereof, and a process for preparing the compound of Formula II by coupling (5R,6S) p-nitrobenzyl-3-(diphenylphosphono)-6-[(1R)-1-hydroxyethyl]-1-azabicyclo[3.2.0]hept-2-ene-7-one-2-carboxylate with 2-aminoethanethiol hydrochloride in the presence of a base, followed by a reaction with a ketone. Further, the invention provides a process for preparing the compound of Formula I by reacting a compound of Formula II with isopropylformimidate or benzylformimidate in the presence of a base, followed by hydrogenation, separation and crystallization.

